

What is claimed is:

1. A liquid crystal display device being characterized in that molecules of liquid crystal interposed between respective substrates which are arranged to face each other in an opposed manner are arranged in the vertical direction with respect to the substrate at the time of applying no voltage, and the liquid crystal display device further includes a plurality of protruding portions which are scattered on a surface of one substrate being in contact with the liquid crystal in respective pixel regions, and projecting portions or recessed portions which are provided about these protruding portions, the projecting portions or the recessed portions being substantially aligned with the directions of respective polarization axes of one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and of another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side.

2. A liquid crystal display device being characterized in that respective substrates are arranged to face each other in an opposed manner with liquid crystal sandwiched therebetween and molecules of the liquid crystal are activated due to electric fields generated between one electrodes which are formed on a liquid crystal side of one substrate out of the respective substrates and another electrodes which are formed on a liquid

crystal side of another substrate out of the respective substrates,

the liquid crystal display device includes one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side, and

one electrode is constituted of a mass of a plurality of sub pixels and includes protruding portions which are positioned at the substantially centers of respective sub pixels on a surface of another substrate which faces the liquid crystal, and projecting portions or recessed portions which are provided about these protruding portions, the projecting portions or the recessed portions being substantially aligned with respective directions of polarization axes of one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and of another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side.

3. A liquid crystal display device being characterized in that the liquid crystal display device includes, on each pixel region of a liquid-crystal-side surface of one substrate out of respective substrates which are arranged to face each other in an opposed manner with liquid crystal sandwiched therebetween, a switching element which is driven by scanning signals from

a gate signal line and a pixel electrode to which video signals are supplied from a drain signal line via the switching element, a counter electrode which corresponds in common to respective pixel regions formed on respective pixel regions on a liquid-crystal-side surface of another substrate, and one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side, and

the pixel electrode is constituted of a mass of a plurality of sub pixels and includes protruding portions which are positioned at the substantially centers of respective sub pixels on a surface of another substrate which faces the liquid crystal, and projecting portions or recessed portions which are provided about the protruding portions, the projecting portions or the recessed portions being substantially aligned with the directions of respective polarization axes of one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and of another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side.

4. A liquid crystal display device being characterized in that the liquid crystal display device includes, on each pixel region of a liquid-crystal-side surface of one substrate out of respective substrates which are arranged to face each other in

an opposed manner with liquid crystal sandwiched therebetween, a switching element which is driven by scanning signals from a gate signal line and a pixel electrode to which video signals are supplied from a drain signal line via the switching element, a counter electrode which corresponds in common to respective pixel regions formed on respective pixel regions on a liquid-crystal-side surface of another substrate, and one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side, wherein

the counter electrode is constituted of a mass of a plurality of sub pixels in each pixel region and includes protruding portions which are positioned at the substantially centers of respective subpixels on a surface of another substrate which is brought into contact with the liquid crystal, and projecting portions or recessed portions which are provided about the protruding portions, the projecting portions or the recessed portions being substantially aligned with the directions of respective polarization axes of one polarizer which is provided to a surface of one substrate at a side opposite to a liquid crystal side and of another polarizer which is provided to a surface of another substrate at a side opposite to a liquid crystal side.

5. A liquid crystal display device according to any one of claims

1 to 4, wherein the liquid crystal contains a chiral material. 4

6. A liquid crystal display device according to any one of claims

1 to 4, wherein the liquid crystal contains no chiral. 1

7. A liquid crystal display device according to claim 3, wherein the projecting portions or the recessed portions are formed on a surface of a leveling film which is formed on a surface of another substrate which is brought into contact with the liquid crystal.

8. A liquid crystal display device according to claim 7, wherein the counter electrode is formed on a surface of a leveling film and the protruding portions are formed on a surface of the counter electrode.

9. A liquid crystal display device according to claim 7, wherein the protruding portions are formed on a surface of a leveling film and the counter electrode is formed on a surface of the leveling film such that the counter electrode also covers the projecting portions.